

The rivets in particular proved an expensive problem. Each hole had to be drilled; if steel were used, 20 rivet holes could have been punched in the time taken to drill the hole for one rivet.

Though iron has been eliminated from bath fittings in every other respect—by installing enameled teak tubs, for example—the designers did find one steel part they have been unable to eliminate—razor blades. But crew members, as well as not being permitted to have steel knives, will not be allowed steel buttons on their clothing. The scientists and others who must keep records will have to use brass paper clips instead of the more familiar steel wire type. One or two chisels and a saw will have to be steel, but they will be stowed as far away from the instruments as possible.

The Research will indeed pick up where the Carnegie had to leave off, for its first voyage will be to the Indian Ocean, where the ill-fated American vessel was to have gone in 1930, the year following its unforeseen disastrous end. Already, the Research's captain, Commander D. H. Fryer, is getting ready for his novel duties by taking a long voyage on a sailing ship.

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YOU WON'T SEE THIS OFTEN

Skilled craftsmen revive an ancient art by pounding in strands of oakum, later to be sealed with tar, to make the R. R. S. Research hull watertight. The hull is of teak. The days of "wooden ships and iron men" are not coming back . . . the men can't be iron on this boat. Crew members won't be permitted steel buttons or knives.

ARCHAEOLOGY

Solve Math Problem Of Egyptian Workmen

TWO Egyptologists have set themselves an arithmetic problem: Knowing dimensions of a huge artificial lake at Thebes, and the brief time in which Egyptians dug it, how many workers were required?

Reporting their work in the *Bulletin de l'Institut d'Egypte*, R. Engelbach and J. W. Macaldin take a privilege that school boys would envy. They offer two answers.

Either Pharaoh Amenophis III put 242,652 men to work on this lake of his, or else he employed 777,262. Even the smaller number would populate a sizable city. The men were rushed to work on the lake project and 16 days later water was let in, and Queen Tiy and King Amenophis sailed regally on their newest possession.

That Egyptians could organize for so swift a job is impressive. Amenophis announced the news of the big lake on a commemorative scarab, which told practically everything a news reader would want to know except the amount of labor. That probably was not rated of

news interest in 1396 B. C. The lake was over a mile long and over half a mile wide.

The Egyptologists get two answers as to laborers required because they do not know how far away the excavated earth was carried. If workmen dumped earth close to the lake, for the time being, 140,716 carriers would have been enough. If earth was removed to mounds farther off, 675,366 carriers were needed. In addition, the Egyptologists figure 50,968 diggers and an equal number of assistant diggers were required. They figure the problem by assuming the excavation was divided into bays in which gangs of diggers and carriers worked together. Egyptians work that way today.

Why Pharaoh Amenophis, one of Egypt's most glamorous and luxury-loving rulers, wanted the lake dug is uncertain. It may have been for his wife's enjoyment. Or it may have been designed as the private harbor for palace boats.

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PSYCHOLOGY

Color Blindness May Be In Mind as Well as Eyes

THE extremely close ties between the workings of the human mind and the human body are given new emphasis by an experiment in which color-blindness was produced by suggestion in a hypnotic trance.

When you see red, it is because of certain physical signals to the retina of your eye. But the interpretation of these signals as red—in fact the perception of them at all—depends upon your mental "set."

At Eloise Hospital, in Michigan, Dr. Milton H. Erickson hypnotized six persons with normal color vision and by suggestion deprived them of the ability to see red, green, red-green, or any color at all. The results he reported to the *Journal of General Psychology*.

It was not a simple task. First, under hypnotism the subjects were made com-

pletely blind. When they awoke from their trance, they were still blind and suffered from all the distress that you would feel if you suddenly roused from sleep without the ability to see.

This put them in a frame of mind to accept the restoration of sight upon any conditions set by the hypnotist. The condition was that they might see objects but not all colors. The suggestion of blindness for one color was carefully made so that the subject would lose all awareness of that color and even the name of it would become to him mere nonsense.

A strange incident occurred to emphasize the actual complexity of the relatively "simple" vision of color. One man who had in this manner lost his vision for red happened, more or less accidentally, to attempt to count his fingers. He